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Fibre Structure. J. W. S. Hearle and R. H. Peters, Editors (1963) 656
The Formation of Wood in Forest Trees. Martin H. Zimmerman, editor (1964) 658
High Speed Testing. Volume IV. A Symposium. A. G. H. Dietz and Frederick R. Eirich (1964) 657
Inorganic Polymer Chemistry. F. G. R. Gimblett (1963) . . 657
Management Control Manual for the Textile Industry. Norbert Lloyd Enrick (1964) 657
The NBS Standard Hygrometer. Arnold Wexler and Richard W. Hyland (1964) 658
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